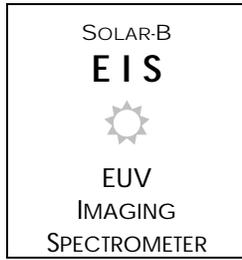


Solar-B EIS



Opto-mechanical engineering meeting

at NRL 18-19 May 1999

AGENDA

EIS-meet-cons-9905agen
16-May
Matthew Whyndham

Day 1 Optical Design & Performance
 Implementation

Day 2 Design Session
 EIS interfaces
 Spacecraft Interfaces
 Future Business
 Tour of NRL Facilities

Topics

Speaker

(begin at 9 am)

Optical Design & Performance

	The EIS optical design	GAD (chair)	
	Design/optimisation criteria	CK	20m
	Optimisation ray trace code	RT	20m
	Properties of the 7T design	CK	20m
(coffee)			
	exploring EIS parameter space: various cases	CK	30m
Scientific performance	Modelling EIS spectral resolution: various cases	KD	10m
Technical feasibility	NASA/GSFC experience in grating fabrications	JD & RT	10m
Discussion		All	45m
(Lunch)			

Implementation

	List of subsystems (based on <i>EIS-sys-des-hiearc</i>)	5m	MWT
	Technology review (for each subsystem)		
	Manufacturing process		
	Suppliers or in-house experience		
	Sources of technical risk		
	Information needed to complete design		
	Need for prototypes		
Structure	Concepts / designs	SM	
	Composite material thermal tests	(JS)	
	Interfaces to optical subassemblies		
	Envelope		
	Accommodation of mechanisms		
	Launch lock		
	Mounting points (s/c legs)		
	Purge ports, outgassing paths		
Mechanisms / electronics	Location	CK	
	Disturbance torques	"	
	Power requirements	"	
	Harness routing		
Unresolved Items	make a list		

Design Session**All**

Structure

envelope SM
 main member position SM

Subsystem accomodation

DOR SM
 FIL CK
 MIR CK
 SLT CK
 SHT MWT
 GRA CK
 FPA MWT
 QCM JL?
 other items

Unresolved items

review list
 assign action items

EIS interfaces

Framework

MWT

Interface list
 Format for interface data
 Axes definition
 Drawing interchange

Specific Items

Detail of interface data
 Mass budget review
 Power budget review
 Schedule for instrument design
 Schedule for interface defintion

Spacecraft interfaces

Framework

Subsystems with s/c interface MWT
 S/c i'face docs/design standards HH
 Mathematical models HH

Specific Items

EIS s/c interface docs review MWT
 Schedule for spacecraft design HH

Future business

Spacecraft design HH
 Instrument design MWT
 Review of Actions MWT
 Phase A activities
 Design reviews
 Consortium Meetings MWT

Tour of facilities

Notes

- 1 Objectives for discussion on optical design
 - Validity of design principles
 - Assess scientific value of design
 - Preferred nomenclature for wavelength ranges
(mwt suggests Baseline=>LW NRL1=>SW)
 - Agree essential points of design
 - Items for further study

- 2 The subsystems are :

STR	Structure	SM
DOR	Door	SM
FIL	Entrance Filter & Clamshell	CK
MIR	Primary Mirror Assembly	CK
SLT	Slit Assembly	CK
SHT	Shutter	MWT
GRA	Grating	CK
FPA	Focal Plane Assembly	MWT
QCM	Contamination Monitor	JL?

- 3 The interface list is
(to follow) MWT

- 4 The s/s interface subsystems are
(to follow) MWT